
Level 2 Award in Pest Management

Accreditation number 100/8797/6

7 February 2014

**IMPORTANT - READ THE FOLLOWING INSTRUCTIONS CAREFULLY
BEFORE ANSWERING THE QUESTIONS**

1. Candidates should enter their candidate number and test series in the space provided below.
2. You should write all of your Answers in the space provided on this exam paper.
3. You are allowed **TWO AND A HALF HOURS** for Answering **ALL** forty five questions.
4. Each question is worth **FIVE** marks.
5. This examination includes multiple-choice questions. Each of these has only **ONE** correct Answer. Candidates should use the spaces between the questions for these Answers.
6. This paper must be left on your desk at the conclusion of the test.

Candidate number _____ Test series _____

Unit 1: Vertebrate Pest Management

- 1 List **FIVE** main differences in appearance, habitat, and capabilities between the brown or common rat (*Rattus norvegicus*) and the ship or black rat (*Rattus rattus*). 5 marks

When making comparisons, your answer should state to which rodent the feature applies.

Answer

2. State **TWO** of the characteristics that help distinguish the rodent **incisor teeth** from the incisors of other mammals. 5 marks

Answer

3a.	a) Which one of the following statements is false:- i. ultra-sonic devices are very effective for eliminating rodents from food stores. ii. removing sources of food is one of the most effective methods of preventing rat infestation. iii. the use of hydrogen cyanide gassing powders for controlling rodents is illegal iv. the use of traps can be particularly effective in controlling small infestations (perhaps 2 individuals) of house mice. v. the use of permanent baits along likely rat runs is a means of preventing re-infestation.	3 marks
Answer		
3b.	List TWO physical features which would help you to distinguish a bank-vole from a house mouse.	2 marks
Answer		
4	Name FIVE wild mammals native to the UK, which, by law, should not be intentionally harmed or killed.	5 marks
Answer		

5. Neophobia is a fear/suspicion of new objects and the physical avoidance of these new objects. How can the pest controller minimise this effect? 5 marks

Answer

6a. House mice are said to be 'sporadic' feeders. Describe this feeding behaviour. 2 marks

Answer

6b. How would knowledge of this behaviour influence the laying of baits when treating an infestation? 3 marks

Answer

7a. How can rats be prevented from entering rainwater down pipes at ground level?	3 marks
Answer	
7b. What most commonly allows rats to come out of the sewer through a road gully?	2 marks
Answer	
8a. How might flooding during the summer in a rural location affect common rat infestations in farm buildings?	2 marks
Answer	
8b. What rodent related health risk may increase as a result of flooding?	2 marks
Answer	
8c. Explain your answer to (b) above.	1 mark
Answer	

9a. Which insect links rats to humans in outbreaks of bubonic plague?	3 marks
Answer	
9b. Which species of rat is commonly linked with this disease in the UK?	2 marks
Answer	
10a. Fumigant products liberating phosphine are approved for use against three mammalian pest species. List TWO of these	2 marks
Answer	
10b. Which one of the following statements is true:-	3 marks
<ul style="list-style-type: none">i. UK law states that anticoagulants may only be used as multi-dose poisonsii. Acute poisons are more effective in warm weatheriii. Prebaiting should always be used before anticoagulant baits may be used out of doorsiv. Brodifacoum can be used out-of-doors in the UKv. None of these	
Answer	

11. Explain the difference between rodent tracking dust and rodent contact dust.	5 marks
Answer	
12a. Can a colony of bats be cleared from a loft to allow treatment to take place for insect pests? Explain your answer.	3 marks
Answer	
12b. Bats in the UK may be implicated in a disease fatal to man. What is the disease?	2 marks
Answer	
13a. For rodent proofing purposes, what is the maximum gap permitted between the bottom of a door and the threshold?	2 marks
Answer	
13b. How would a door be made rodent proof?	3 marks
Answer	

14a. How does alphachloralose kill mice?	2 marks
Answer	
14b. Why is alphachloralose less effective against rats than mice?	3 marks
Answer	
15. Rats have become resistant to a rodenticide that has been used at the correct dosage. It is not a good idea to increase the dosage. Give TWO reasons for this other than legal prohibitions and cost.	5 marks
Answer	

PLEASE TURN OVER

Unit 2: Invertebrate Pest Management

16a. Insects can never be as large as rats because:-	3 marks
<ul style="list-style-type: none">i. Their cuticle is too weak.ii. They could not get enough food to eat.iii. They could not get enough oxygen to all of their body.iv. Their muscles are not strong enough. <p>Their cuticle would be too tough.</p>	
Answer	
16b. What does the term 'diptera' mean?	2 marks
Answer	
17. State which type of metamorphosis EACH of the following insects undergo.	5 marks
<ul style="list-style-type: none">a) Wasps.b) Earwigs.c) Brown House Moth.d) German Cockroach.e) Silverfish.	
Answer	
18a. What is an ectoparasitic pest?	2 marks
Answer	

18b.	Name THREE common, ectoparasitic insects (NOTE – your answer must be selected from different insect orders).	3 marks
19a.	<p>What period elapses before nymphs emerge from the deposited egg capsule of the Oriental cockroach (<i>Blatta orientalis</i>):-</p> <ul style="list-style-type: none"> i. Immediate emergence. ii. After 2 days. iii. After 2 weeks. iv. Up to 4 weeks. v. 6-12 weeks or more. 	3 marks
Answer		
19b.	Why do crickets 'stridulate' or sing?	2 marks
Answer		
20.	Apart from Pharaoh's ant, name TWO species of ant which are likely to infest warm buildings such as hospitals, office blocks, bakeries, etc.	5 marks
Answer		

21.	An infestation of houseflies is present in a commercial kitchen and a landfill site.	5 marks
State an appropriate method of treatment for EACH of these situations		
Answer		
22.	Name FIVE insect pests that can damage structures or fabrics of domestic dwellings.	5 marks
Answer		
23a.	State TWO locations where mosquitoes are likely to breed in a domestic environment.	2 marks
Answer		
23b.	What methods could individuals in the community take to reduce the incidence of mosquitoes on their property?	3 marks
Answer		

24.	You are called to deal with an infestation of oriental cockroaches in a food store for organic produce with a Soil Association accreditation.	5 marks
Apart from the use of sticky traps describe TWO ways in which the infestation can be controlled without contravening this accreditation.		
Answer		
25.	State TWO disadvantages arising from the incorrect use of electronic fly killers (EFKs) in food premises.	5 marks
Answer		
26.	Why would a juvenile hormone “insecticide” be of little use against a clothes moth or carpet beetle?	5 marks
Answer		

27a.	a) What is a pheromone?	2.5 marks
Answer		
27b.	Why might a manufacturer use a 'pheromone' in a preparation intended for the control of insects?	2.5 marks
Answer		
28.	Describe the difference in mode of action between fipronil and bendiocarb when used as insecticides.	5 marks
Answer		
29.	What is the main difference in performance between a crawling insect spray and a flying insect spray?	5 marks
Answer		

30. Give **TWO** reasons to explain why it is recommended that post treatment monitoring is carried out in a range of pest control treatments. 5 marks

Answer

PLEASE TURN OVER

Unit 3: Health, Safety and Legal Aspects of Pest Management

31. Apart from the provision of Personal Protective Equipment, give TWO measures which would be reasonable to expect an employer to take to protect his/her pest control staff from the possible effects of contracting a rat-borne disease.	5 marks
Answer	
32a. Explain the difference between a 'hazard' and a 'risk' , as defined by the Health and Safety Executive.	3 marks
Answer	
32b. Give a simple example from work in pest control to illustrate that you understand the difference.	2 marks
Answer	

33. State **TWO** properties which should be looked for when selecting coveralls to wear when handling pesticides 5 marks

Answer

34. Outline **TWO** risks that a pest control technician may be exposed to as a result of spraying a kerosene based insecticide in a loft space 5 marks

Answer

35a. The rat oral LD₅₀s for a number of insecticide products are shown below. Which product is the *least* toxic to mammals? 3 marks

- i. 273 mg/kg.
- ii. 892 mg/kg.
- iii. 159 mg/kg.
- iv. 2,809 mg/kg.
- v. 2,277 mg/kg.

Answer

35b. What is the title of the legislation where schedules of those bird species which may be killed, or which are protected may be found?	2 marks
Answer	
36. When mixing any pesticide concentrate, list TWO reasons why it should not be mixed to a higher concentration than is stated on the label.	5 marks
Answer	
37. List FIVE faults or defects of a wooden extending ladder that would mean it was unsafe to use.	5 marks
Answer	
38a. The build up of excrement from feral pigeons roosting on buildings and structures such as railway bridges can result in action being taken under which legislation?	2.5 marks
Answer	

38b.	What other legislation empowers a local authority to take action against the build up of bird populations in their area?	2.5 marks
Answer		
39a.	In a pest control store pesticides must be stored so that any leakage can be contained. Give a feature of store design or organisation which will make this possible	2 marks
Answer		
39b.	All of the following are objectives of the Food and Environment Protection Act, <i>except for:-</i>	3 marks
<ul style="list-style-type: none"> i. To protect the health of human beings, creatures and plants. ii. To safeguard the environment. iii. To secure safe, efficient and humane methods of controlling pests. iv. To make information about pesticides available to the public. v. To require employers to assure the safety of their employees. 		

<p>40. A technician will normally wear full protective clothing, respirator, etc when spraying a particular insecticide inside a house. The occupants of the house may be concerned that they are unprotected as they live in the treated house.</p> <p>Give TWO reasons why the occupants do not have to wear protective clothing, but the technician does.</p>	<p>5 marks</p>
<p>Answer</p>	
<p>41a. It is a legal requirement that “adequate procedures are in place to ensure pests are controlled” in catering and other food premises.</p> <p>In which piece of legislation is this requirement found?</p>	<p>2 marks</p>
<p>Answer</p>	
<p>41b. Give THREE examples of procedures which should be undertaken to help satisfy this requirement.</p>	<p>3 marks</p>
<p>Answer</p>	

42. You are about to start treating a wasps' nest with a dust gun. The lid is insecure, and blows off when you apply pressure, covering you with insecticide. 5 marks

What series of actions should be taken?

Answer

43a. A pest controller has been requested to leave rodent bait with a householder who has undertaken to place, check and top up the baits himself. 3 marks

Is it possible to agree to this request? Explain your answer.

Answer

43b. What if any are the potential pitfalls in agreeing to such a request? 2 marks

44. State **TWO** safety requirements relating to the fixed storage cabinet for moisture-activated gassing compounds. 5 marks

Answer

45a. Under Health & Safety legislation what is a “permit to work”? 3 marks

Answer

45b. Describe an area in a pest control work activity where such a permit would be appropriate. 2 marks

Answer

END OF PAPER